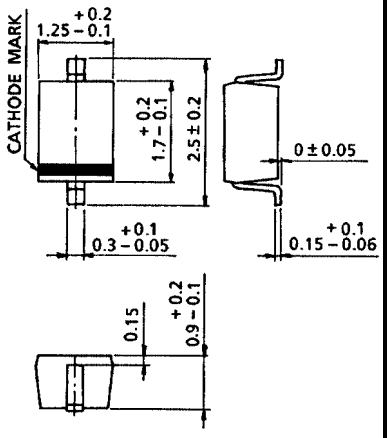
TOSHIBA Variable Capacitance Diode Silicon Epitaxial Planar Type

1SV217

CATV Tuning

- High capacitance ratio: $C_{2\ V}/C_{25\ V}$ = 12.5 (typ.)
- Excellent C-V characteristics, and small tracking error.
- Useful for small size tuner.

Unit: mm



JEDEC	—
JEITA	—
TOSHIBA	1-1E1A

Weight: 0.004 g (typ.)

Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Reverse voltage	V_R	30	V
Peak reverse voltage	V_{RM}	35 (R_L = 10 kΩ)	V
Junction temperature	T_j	125	°C
Storage temperature range	T_{stg}	−55~125	°C

Electrical Characteristics (Ta = 25°C)

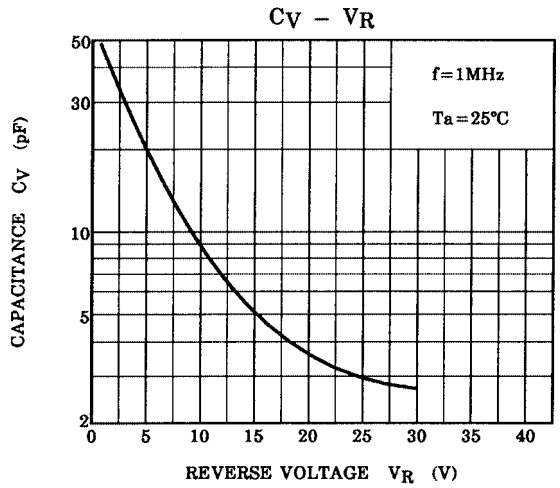
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Reverse voltage	V_R	I_R = 1 μA	30	—	—	V
Reverse current	I_R	V_R = 28 V	—	—	10	nA
Capacitance	$C_{2\ V}$	V_R = 2 V, f = 1 MHz	33	36	39	pF
Capacitance	$C_{25\ V}$	V_R = 25 V, f = 1 MHz	2.6	2.88	3.2	pF
Capacitance ratio	$C_{2\ V}/C_{25\ V}$	—	11.5	12.5	—	—
Series resistance	r_s	V_R = 5 V, f = 470 MHz	—	0.83	1.0	Ω

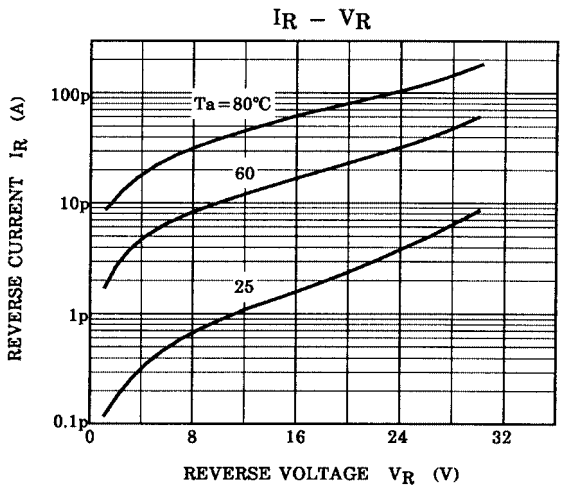
Note 1: Available in matched group for capacitance to 2.5%.

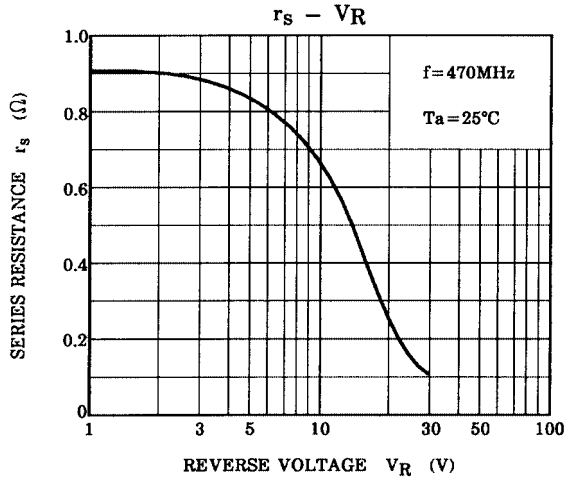
$$\frac{C\ (max) - C\ (min)}{C\ (min)} \leqq 0.025$$

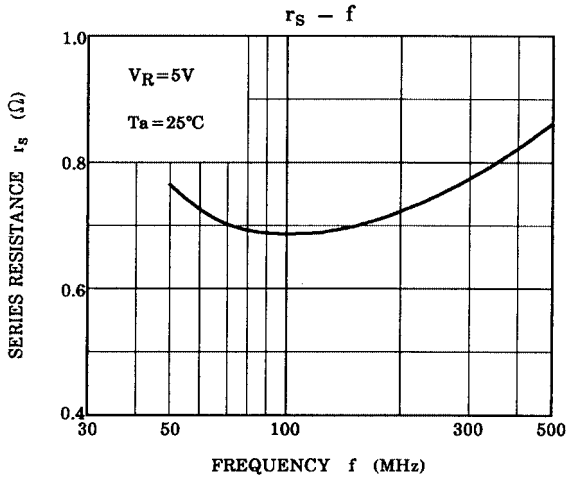
(V_R = 2~25 V)

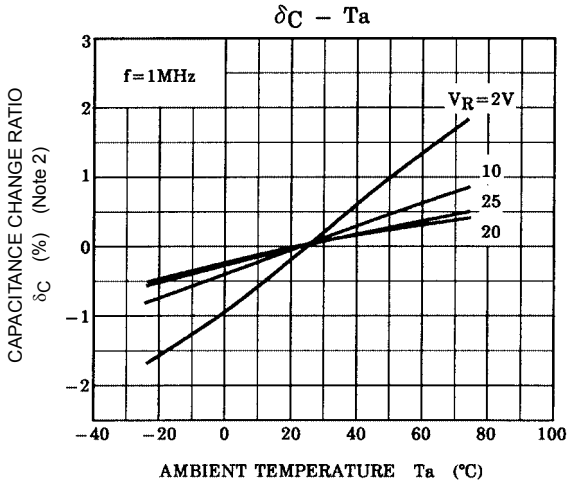
Marking











Note 2: $\delta_C = \dfrac{C\ (Ta) - C\ (25)}{C\ (25)} \times 100\ \ (\%)$

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